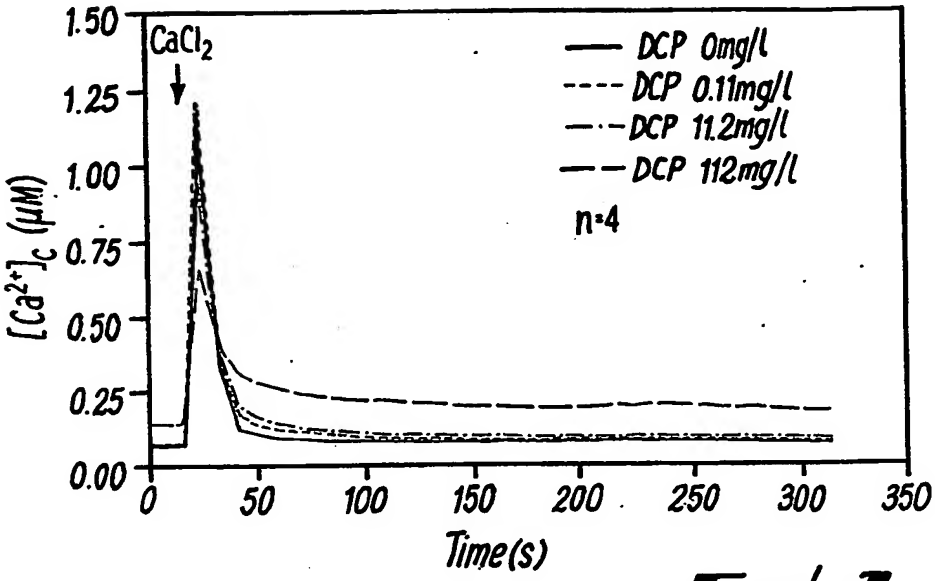
1.50
1.25
1.00
0.75
0.50
0.25
0.00
$[Ca^{2+}]_c$ (μM)
$CaCl_2$
DCP 0mg/l
DCP 0.11mg/l
DCP 11.2mg/l
DCP 112mg/l
n=4
0
50
100
150
200
250
300
350
Time(s)

FIG. 1

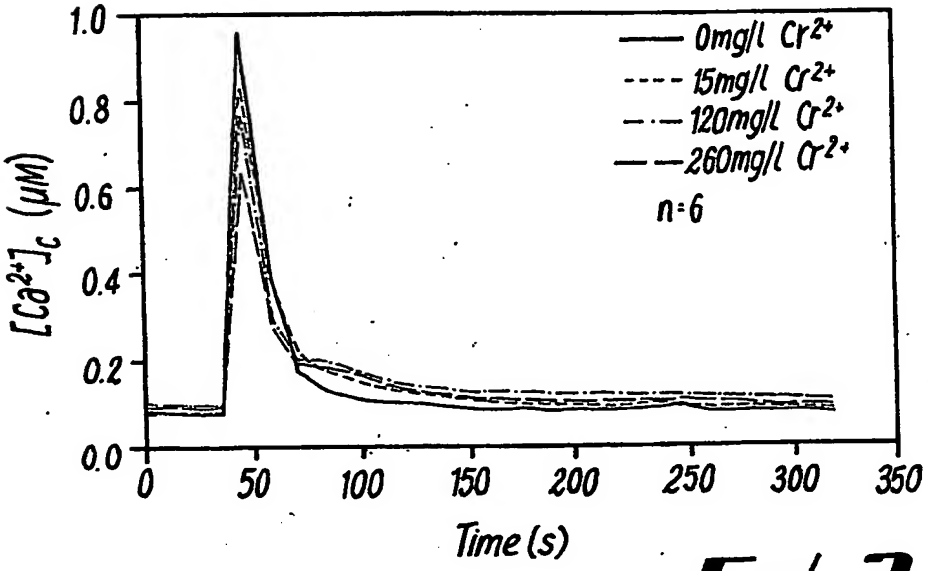
1.0
0.8
0.6
0.4
0.2
0.0
$[Ca^{2+}]_c$ (μM)
0mg/l Cr^{2+}
15mg/l Cr^{2+}
120mg/l Cr^{2+}
260mg/l Cr^{2+}
n=6
0
50
100
150
200
250
300
350
Time (s)

FIG. 2

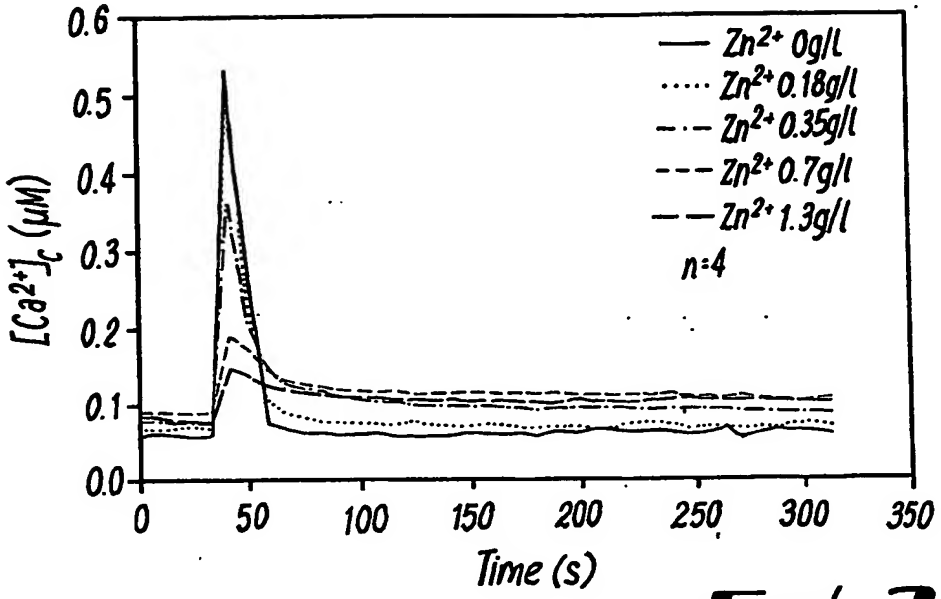
0.6
0.5
0.4
0.3
0.2
0.1
0.0
$[Ca^{2+}]_c$ (μM)
0
50
100
150
200
250
300
350
Time (s)
Zn^{2+} 0g/l
Zn^{2+} 0.18g/l
Zn^{2+} 0.35g/l
Zn^{2+} 0.7g/l
Zn^{2+} 1.3g/l
n=4

FIG. 3

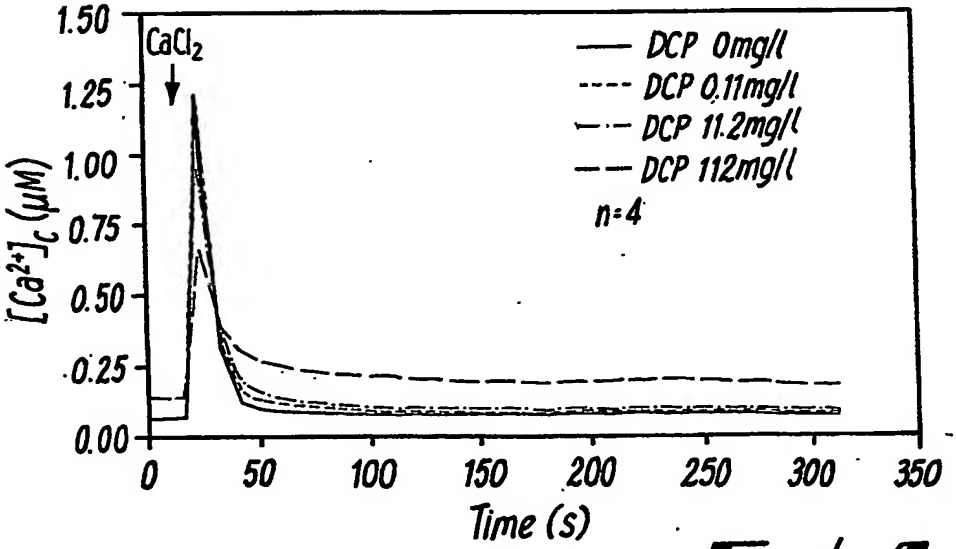
1.50
1.25
1.00
0.75
0.50
0.25
0.00
$[Ca^{2+}]_c$ (μM)
$CaCl_2$
0
50
100
150
200
250
300
350
Time (s)
DCP 0mg/l
DCP 0.11mg/l
DCP 11.2mg/l
DCP 112mg/l
n=4

FIG. 4

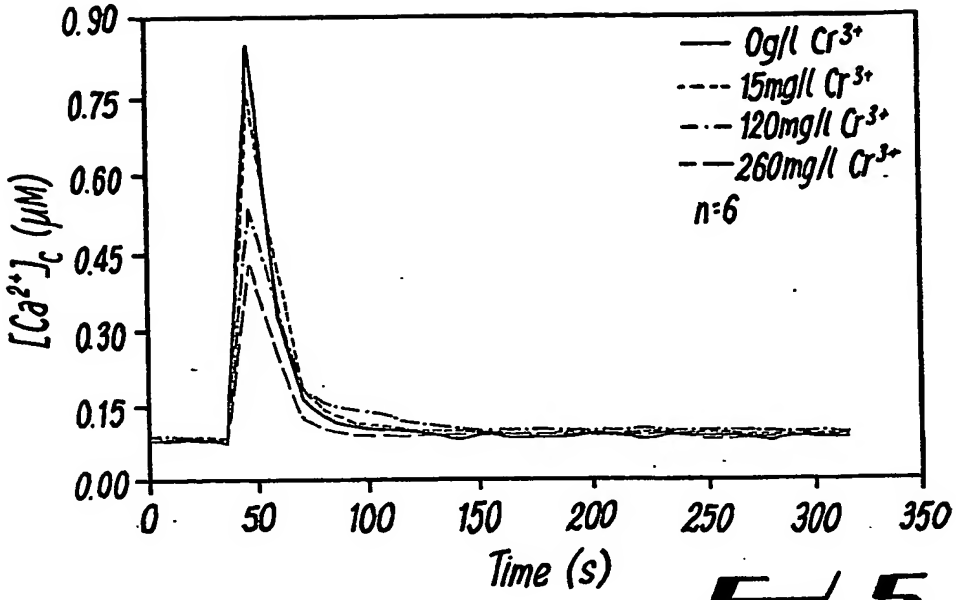
0.90
0.75
0.60
0.45
0.30
0.15
0.00
$[Ca^{2+}]_c$ (μM)
0
50
100
150
200
250
300
350
Time (s)
0g/l Cr^{3+}
15mg/l Cr^{3+}
120mg/l Cr^{3+}
260mg/l Cr^{3+}
n=6

FIG. 5

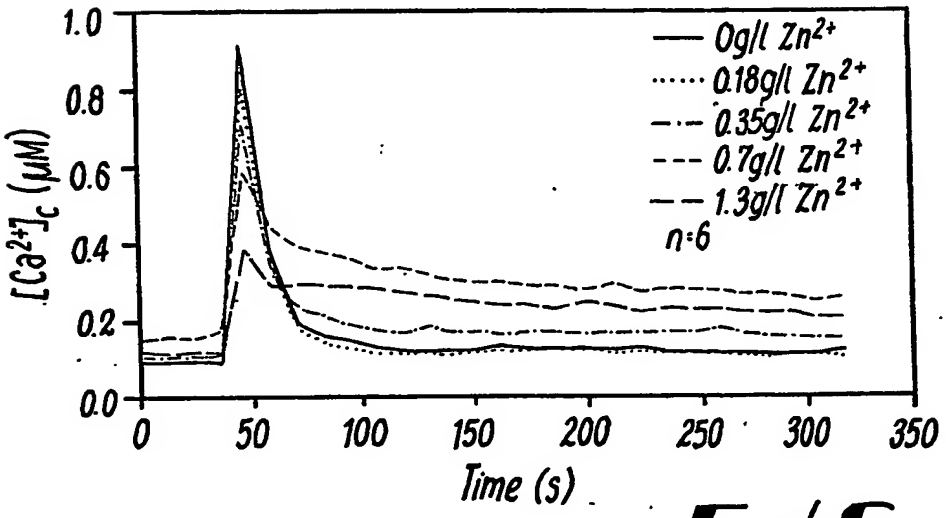
1.0
0.8
0.6
0.4
0.2
0.0
$[Ca^{2+}]_c$ (μM)
0
50
100
150
200
250
300
350
Time (s)
0g/l Zn^{2+}
0.18g/l Zn^{2+}
0.35g/l Zn^{2+}
0.7g/l Zn^{2+}
1.3g/l Zn^{2+}
n=6

FIG. 6

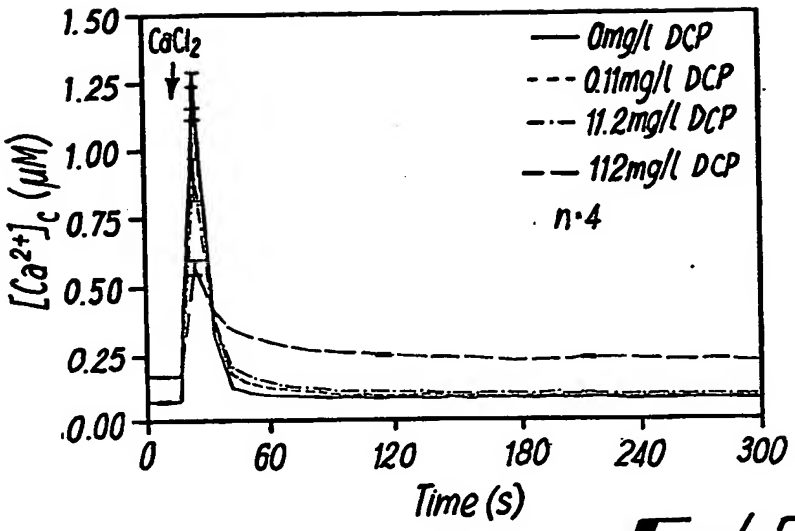
1.50
1.25
1.00
0.75
0.50
0.25
0.00
$[Ca^{2+}]_c$ (μM)
$CaCl_2$
0mg/l DCP
0.11mg/l DCP
11.2mg/l DCP
112mg/l DCP
n·4
0
60
120
180
240
300
Time (s)

FIG. 7

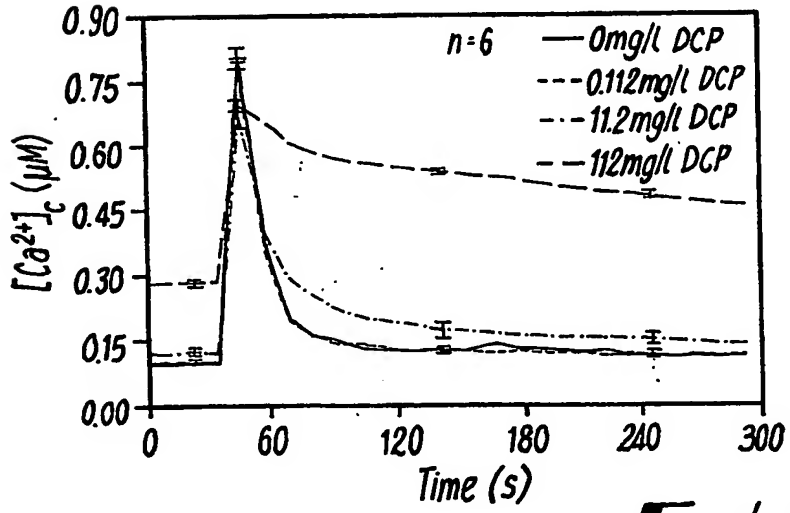
0.90
0.75
0.60
0.45
0.30
0.15
0.00
$[Ca^{2+}]_c$ (μM)
n=6
0mg/l DCP
0.112mg/l DCP
11.2mg/l DCP
112mg/l DCP
0
60
120
180
240
300
Time (s)

FIG. 8

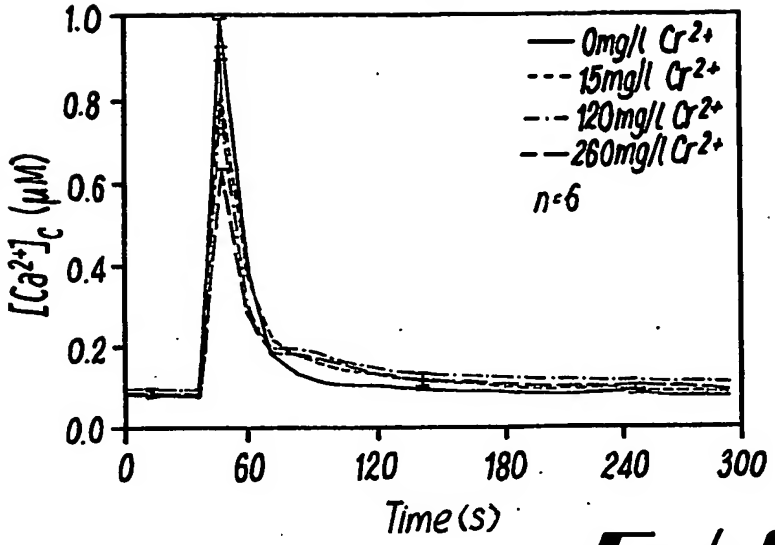
1.0
0.8
0.6
0.4
0.2
0.0
$[Ca^{2+}]_c$ (μM)
0
60
120
180
240
300
Time (s)
0mg/l Cr^{2+}
15mg/l Cr^{2+}
120mg/l Cr^{2+}
260mg/l Cr^{2+}
n=6

FIG. 9

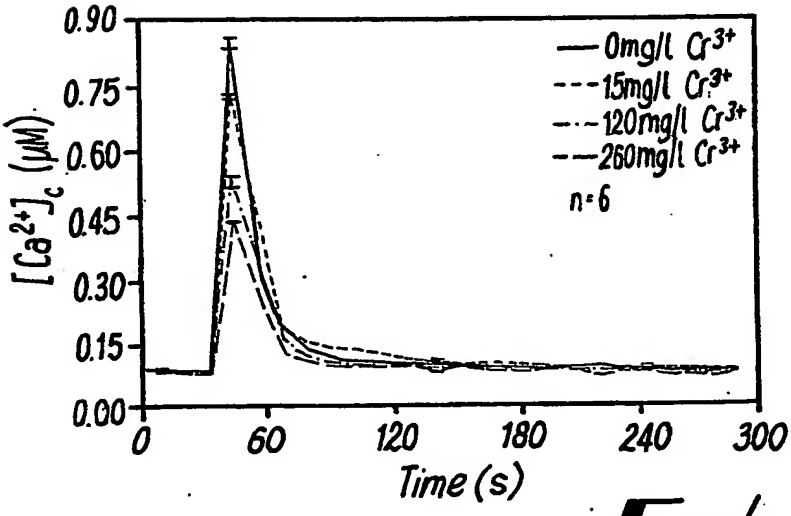
0.90
0.75
0.60
0.45
0.30
0.15
0.00
$[Ca^{2+}]_c$ (μM)
0
60
120
180
240
300
Time (s)
0mg/l Cr^{3+}
15mg/l Cr^{3+}
120mg/l Cr^{3+}
260mg/l Cr^{3+}
n=6

FIG. 10

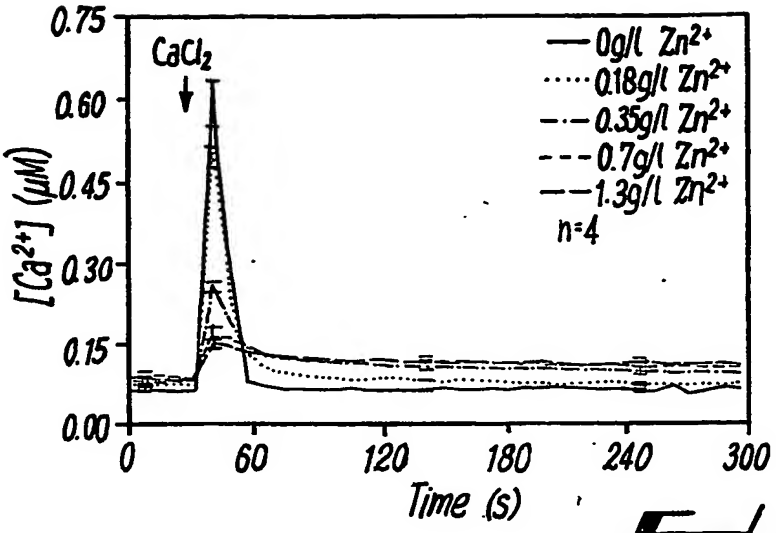
0.75
0.60
0.45
0.30
0.15
0.00
$[Ca^{2+}]$ (μM)
$CaCl_2$
0g/l Zn^{2+}
0.18g/l Zn^{2+}
0.35g/l Zn^{2+}
0.7g/l Zn^{2+}
1.3g/l Zn^{2+}
n=4
0
60
120
180
240
300
Time (s)

FIG. 11

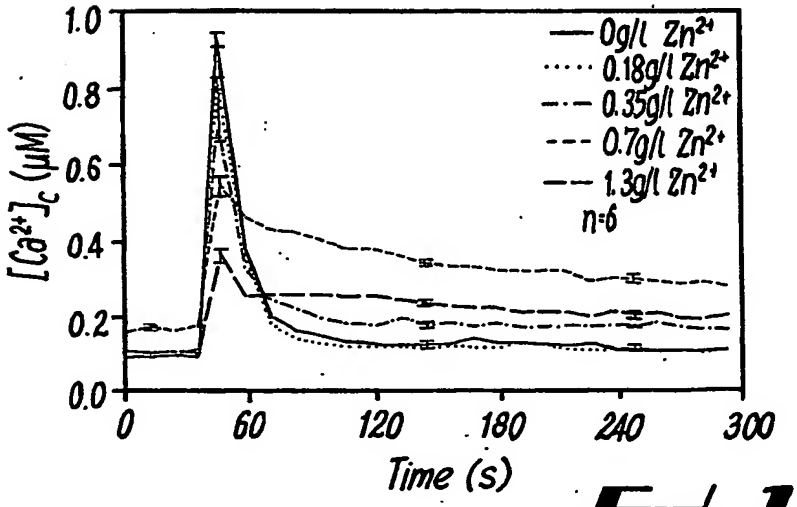
1.0
0.8
0.6
0.4
0.2
0.0
$[Ca^{2+}]_c$ (μM)
0g/l Zn^{2+}
0.18g/l Zn^{2+}
0.35g/l Zn^{2+}
0.7g/l Zn^{2+}
1.3g/l Zn^{2+}
n=6
0
60
120
180
240
300
Time (s)

FIG. 12

Chemical	Values of interest (mg/l)	LT		RT		A		LT_{50}		%IpreSRL	%IFRL		%IRT		Number of increases	
		S1	S2	S1	S2	S1	S2	S1	S2	S2	S1	S2	S1	S2	S1	S2
	0.01	0	0	1	1	75±23	100±5	↑	-	97±9	115±6	104±6	111±4	102±3	1	1
	0.1	0	0	1	1	74±22	91±5	↑	-	104±9	118±5	104±11	122±9	99±3	1	1
PCP	1	0	0	1	1	72±14	80±10	↑	-	109±5	204±13	107±11	195±8	109±6	1	1
	5	0	0	12.6	1	199±26	89±14	↑	↑	120±3	209±7	205±9	274±4	218±7	1	1
	10	0	0	12.6	12.6	417±73	175±27	↑	↑	131±9	305±17	253±7	373±22	308±4	1	1
	1	0	0	1	1	111±48	102±8	-	-	125±34	116±5	106±7	114±6	109±9	1	1
	10	0	0	12.6	1	246±19	118±4	↑	↑	136±13	162±7	120±13	243±14	154±10	1	1
SDS	50	0	0	12.6	1	295±33	115±12	↑	↑	323±19	237±9	222±16	328±6	287±10	1	1
	100	0	0	12.6	1	293±19	116±3	↑	↑	359±24	405±15	256±14	367±11	286±12	1	1
	500	0	n.a.	12.6	n.a.	998±35	n.a.	↑	n.a.	n.a.	561±12	n.a.	565±12	n.a.	1	n.a.
Toluene	1	n.a.	0	n.a.	1	n.a.	74±13	n.a.	-	129±9	n.a.	113±3	n.a.	115±2	n.a.	1

Note: LT=lag time
RT=rise time
A=changes in A (%)

%IpreSRL=% increase in pre-stimulation resting level
%IFRL=% increase in final resting level
%IRT=% increase in recovery time
S1=Stage 1
S2=Stage2

FIG. 13

Chemical	Values of interest (mg/l)	LT		RT		A		LT_{50}		%IpreSRL	%IFRL		%IRT		Number of increases	
		S1	S2	S1	S2	S1	S2	S1	S2	S2	S1	S2	S1	S2	S1	S2
3,5 DCP	10	0	0	12.6	1	40±2	79±25	↑	↑	102±3	134±10	172±21	153±13	207±23	1	1
PCP	10	0	0	12.6	12.6	417±73	175±27	↑	↑	131±9	305±17	253±7	373±22	308±4	1	1
Zn^{2+}	700	0	0	12.6	1	42±5	74±1	↑	↑	142±18	225±8	263±14	258±5	225±12	1	1
Cr^{6+}	15	0	0	1	1	41±5	84±23	-	-	102±12	104±5	110±11	103±2	120±28	1	1
Toluene	25 (1)	0	0	n.a.	1	n.a.	73±13	n.a.	↑	121±6	n.a.	113±3	n.a.	115±2	1	1
SDS	500	0	0	12.6	1	998±35	116±3	↑	↑	359±24	561±12	256±14	565±12	286±12	1	1

Note: LT=lag time
RT=rise time
A=changes in A (%)

%IpreSRL=% increase in pre-stimulation resting level
%IFRL=% increase in final resting level
%IRT=% increase in recovery time
S1=Stage 1
S2=Stage2

FIG 14

Chemical	Values of interest (mg/l)	LT		RT		A		LT_{50}		%IpreSRL	%IFRL		%IRT		Number of increases	
		S1	S2	S1	S2	S1	S2	S1	S2	S2	S1	S2	S1	S2	S1	S2
3,5 DCP	10	0	0	12.6	1	40±2	79±25	↑	↑	102±3	134±10	172±21	153±13	207±23	1	1
Cr^{6+}	15	0	0	1	1	41±5	84±23	-	-	102±12	104±5	110±11	103±2	120±28	1	1
Zn^{2+}	700	0	0	12.6	1	42±5	74±1	↑	↑	142±18	225±8	263±14	258±5	225±12	1	1
SDS	500	0	0	12.6	1	998±35	116±3	↑	↑	359±24	561±12	256±14	565±12	286±12	1	1
3,5-DCP + Cr^{6+}	6+12	0	0	12.6	1	33±4	88±13	↑	-	96±26	117±4	120±14	128±5	119±10	1	1
$Cr^{6+}Zn^{2+}$	30+350	*0*	0	*1*	1	*23±6*	76±4	↑	-	100±5	*143±18*	150±12	*158±26*	154±6	*1*	2
3,5DCP +Zn^{2+}	10+350	*0*	0	*12.6*	1	*65±5*	86±2	↑	-	103±9	*294±18*	153±16	*311±14*	208±11	*1*	2
3,5-DCP+ Cr^{6+} Zn^{2+}	6+12+350	*0*	0	*12.6*	1	*25±2*	79±5	↑	-	102±8	*164±4*	150±9	*160±5*	195±8	*1*	2
Mixture 1	See M&M	0	0	12.6	12.6	466±13	128±6	↑	↑	262±13	402±17	501±38	446±17	477±28	2	2
Mixture 2	See M&M	0	0	1	1	116±8	69±14	↑	-	148±16	177±44	132±27	170±28	120±7	1	1

Italics represents data obtained with very high concentrations of toxicants: Zn^{2+}=700 mg/l; Cr^{6+}=120 mg/l; 3,5 DCP=49 mg/l

FIG. 15

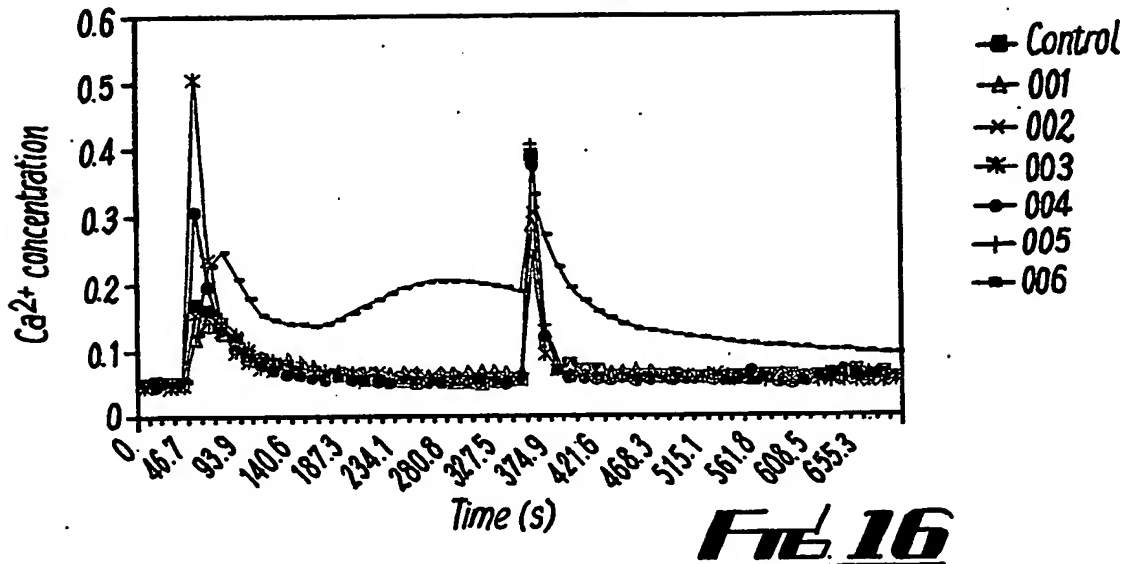

FIG. 16

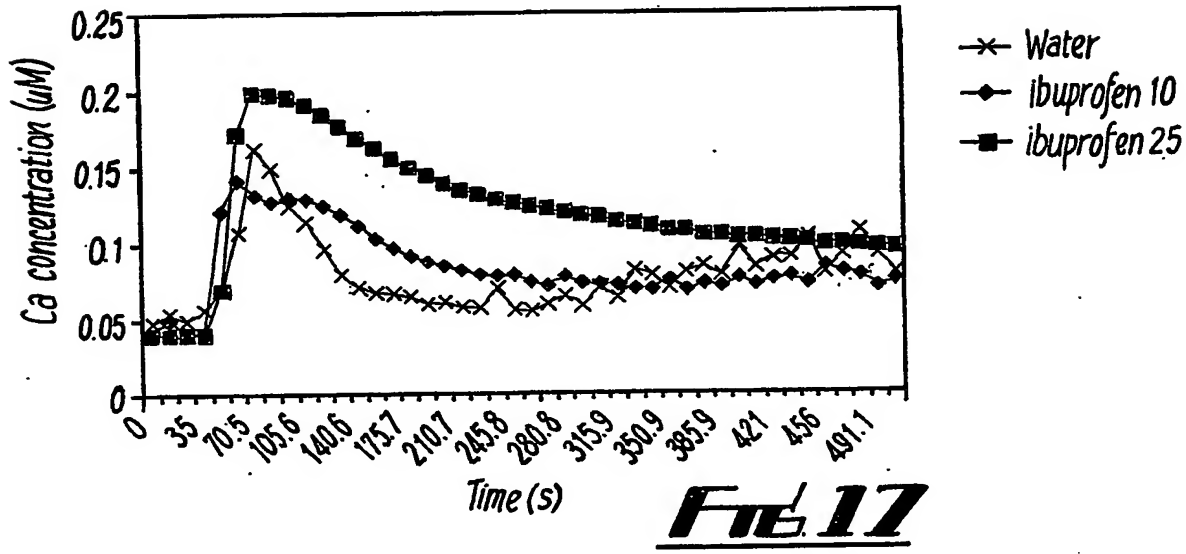

FIG. 17

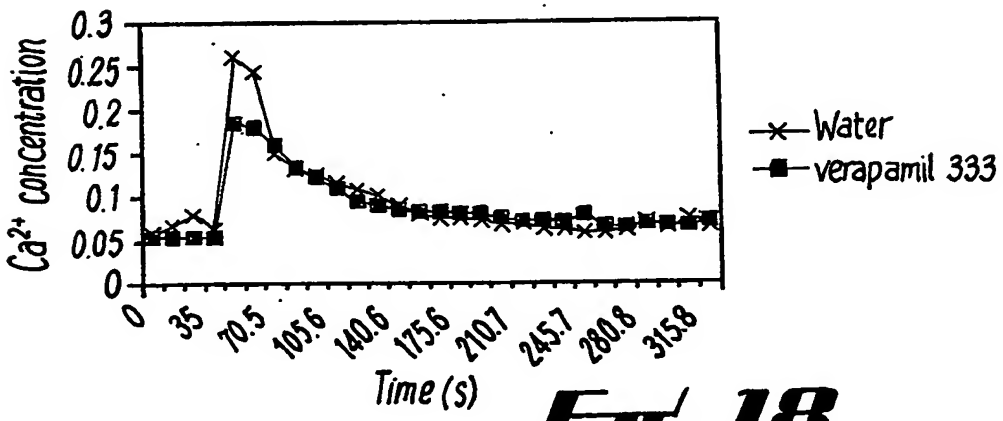

FIG. 18

Chemical	Concentration (mg/l)	RT	A	LT_{50}	%IFRL	%IRT
Ibuprofen	10	↓	-	↓	-	-
	25	-	↑↑	↑	-	↑
Verapamil	333	-	↑	-	-	-

FIG. 19

Chemical	Concentration (μM)	RT	A	LT_{50}	%IPreRL	%IFRL	%IRT
CPA	10	-	-	-	-	-	-
	20	-	↑	↑	↑	↑	↑
	50	-	↑↑	↑	3*↑	4*↑	4*↑
KP4	5.4	-	↓	↑	-	-	-

FIG. 20

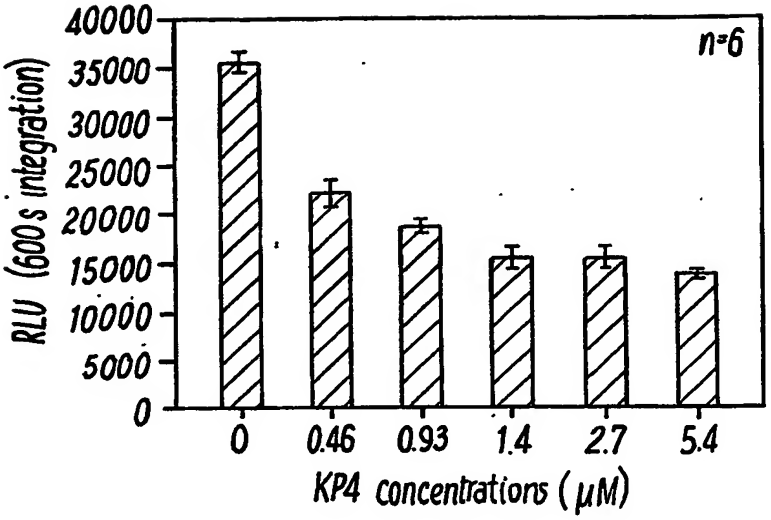

Fig. 21

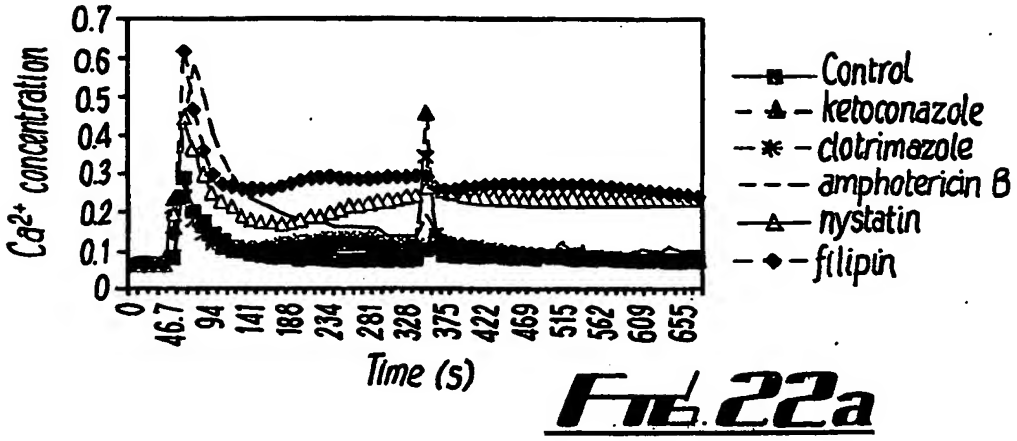

Fig. 22a

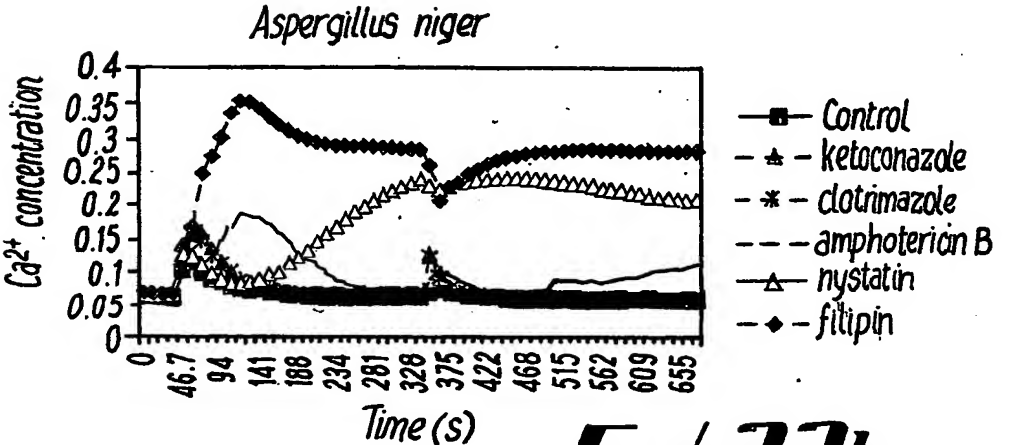

Fig. 22b

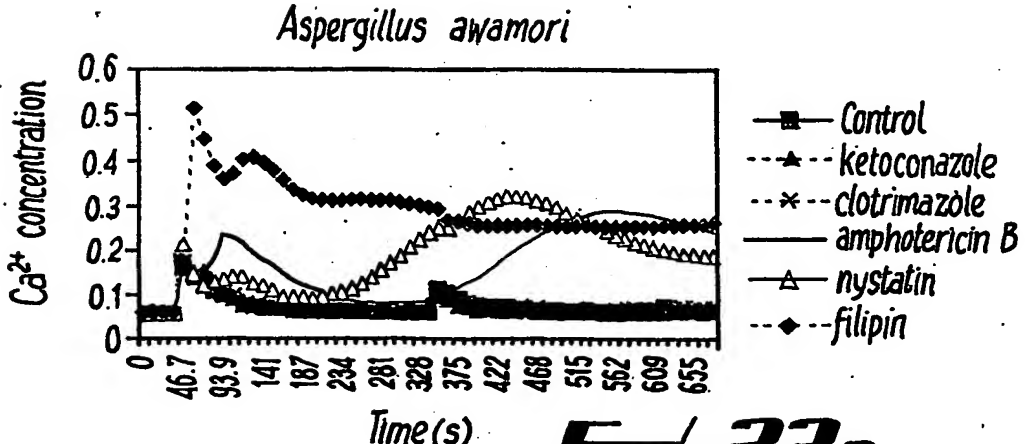

Fig. 22c

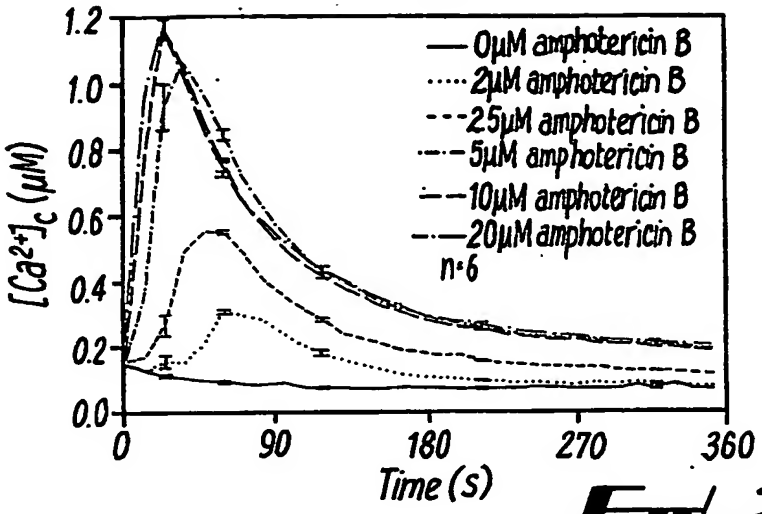

FIG. 23

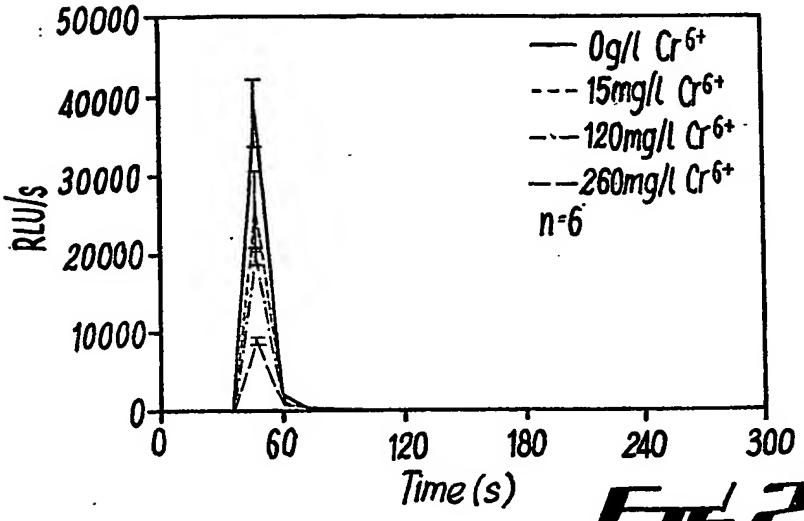

FIG. 24

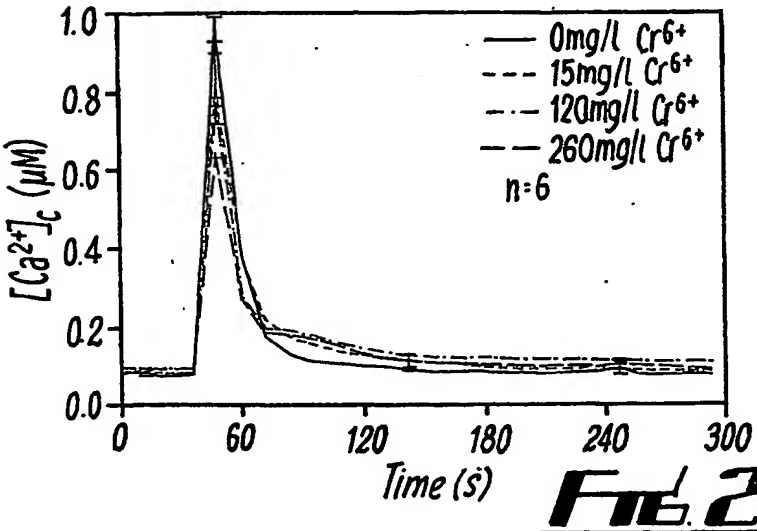

FIG. 25